MASU

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: **Semi-Metallic Disc Pad (SM-469)**

Manufacturer/Supplier: **Masu Brake Pads Pvt. Ltd.**
Address: CH7 & CH10, Govt. Industrial Area
Bahadurgarh, Haryana, India
Telephone: +91-8603030377

Product Use Overview Product Use Overview: MASU BRAKES PADS. PVT LTD. (India) materials are a resin bonded product which do not contain asbestos. When used as intended, these products meet the OSHA definition of an article and are exempt from the Hazard Communication Standard.
Materials listed on this data sheet are contained in these products. Exact percentages are proprietary and confidential and will not be disclosed other than as required in accordance with the regulations.
The data sheet is not part of any contract or sale. While the information and recommendations set forth herein are believed to be accurate, MASU BRAKE PADS PVT. LTD. makes no warranty with respect thereto and disclaims all liability from reliance thereon.
All applicable and aforementioned standards and specifics must be consulted for specific requirements,

2. Hazards Identification

Classification: Carcinogen Categor 1, pecific Target Organ Toxicit Repeat xposure Categor 1 lungs and respirator s stem , in ensiti er Categor 1

Label Elements:

Danger

Hazard Phrases	Precautionary Phrases
Ma cause an allergic s in reaction Ma cause cancer b inhalation Causes damage to lungs and respirator s stem through prolonged or repeated exposure b inhalation	Obtain special instructions before use Do not handle until all safet precautions ha e been read and understood Do not breathe dust or fume ash thoroughl after handling Contaminated or clothing should not be allo ed out of the or place ear protecti e glo es, clothing, e e protection and face protection IF O I ash ith plent of ater If s in irritation or rash occurs Get medical attention Ta e off contaminated clothing and ash it before reuse IF exposed or concerned Get medical attention tore loc ed up Dispose of contents and container in accordance ith local, regional and national regulations

3. Composition / Information on Ingredients

Chemical Name	CAS#	%
Aluminum Oxide	13□□□2□□1	□1□
Barium sulfate	□□2□□□3□□	□1□
Copper	□□□0□50□□	□1□
Zinc	□□□0□50□□	□1□
Graphite	□□□2□□2□5	□1□
Cellulose Fiber	□00□□3□□□	□1□
Iron	□□3□□□□□□	□1□
Magnesium Oxide	130□□□□□□	□1□
□teel Fiber	□□3□□□□□□	□1□
Phenol	10□□□5□2	□1□

The exact concentration is being withheld as a trade secret.

Refer to □ection □ for occupational exposure limits□

4. First Aid Measures

Eye: Do not rub e□es□Flush □ith large amounts of □ater□□□elids should be held a□a□from the e□eball to ensure thorough rinsing□If irritation persists or if there is a foreign bod□in the e□e, get medical attention□
Skin: □ ash area of contact gentl□□□ith soap and □ater□□aunder contaminated clothing before reuse□Get medical attention if irritation or rash de□elops or persists□
Inhalation: If s□mptoms de□elop, remo□e person from source of exposure to fresh air□Get medical attention if irritation persists□
Ingestion: □ot an anticipated route of exposure□If s□allo□ed, drin□ 1 or 2 glasses of □ater to dilute□ □e□er gi□e an□thing b□mouth to an unconscious or con□ulsing person□Get medical attention□

Most important symptoms/effects, acute and delayed: Dust ma□cause mechanical e□e and s□in irritation and respirator□irritation□Ma□cause s□in sensiti□ation□Prolonged inhalation of dusts or fumes ma□cause lung damage□ Prolonged o□erexposure to respirable cr□stalline silica ma□cause lung disease □silicosis□□This product contains cr□stalline silica, □uart□, titanium dioxide, diantimon□trioxide and nic□el □hich ma□cause cancer based on animal studies□Ris□of cancer depends on duration and le□el of exposure□

Indication of immediate medical attention and special treatment: □o immediate medical treatment is re□uired□

5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: □se an□media suitable for the surrounding fire□

Special protective equipment and precautions for fire-fighters: Firefighters should □ear positi□e pressure self□ contained breathing apparatus and full protecti□e clothing for fires in□ol□ing chemicals□

Specific hazards arising from the chemical: Combustion products from organic resins ma□include carbon monoxide, carbon dioxide, nitrogen oxides, sulfur dioxide, aldeh□des, phenols, c□anide, ammonia and □arious h□drocarbons□

6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: □ ear appropriate protecti□e clothing and e□uipment to a□oid e□e and s□in contact□

Environmental hazards: A□oid release to the en□ironment□Report spill as re□uired b□local and federal regulations□

Methods and materials for containment and cleaning up: Pic□up large pieces□□se □□PA □acuum to clean up an□dust□□ et dust □ith □ater □here s□eeping is necessar□□Personal safet□and exposure recommendations described else□here in this data sheet appl□to exposure during clean□up of spilled material□Refer to □ection 13 for disposal considerations□

7. Handling and Storage

Precautions for safe handling: A□oid generating dust□Do not breathe dust□Do not grind, sand, drill or machine these parts□Follo□ good house□eeping to pre□ent accumulation of dust on floors, machiner□and e□uipment□Do not dr□s□eep dust□□ et dust □ith □ater before s□eeping or use a □□PA □acuum to collect dust and clean e□uipment□ Do not use compressed air for cleaning□□ ash thoroughl□after □or□using soap and □ater□

These products do not contain asbestos, ho□e□er, the O□□A Asbestos □tandard □2□CFR 1□10□1001□Appendix F, □□ or□Practices and □ngineering Controls for Automoti□e Bra□e and Clutch Inspection, Disassembl□, Repair and Assembl□□, contains guidance on minimi□ing emplo□ee exposure during bra□e operations□Masu Brake Pads Pvt. Ltd. recommends that these □or□practices and engineering controls be implemented e□en □hen □or□ing □ith non□ asbestos bra□es□

Conditions for safe storage, including any incompatibilities: □eep product dr□□

8. Exposure Controls / Personal Protection

Exposure guidelines:

Hazardous Components	Exposure Limits
□on□ha□ardous ingredients	□one □stablished
Aluminium Oxide	1 mg/m3 Respirable Fraction 15 mg/m3 Total Dust 5 mg/m3 Respirable Fraction
Barium sulfate	5 mg/m3 Inhalable Fraction 15 mg/m3 Total Dust 5 mg/m3 Respirable Fraction
Copper	1 mg/m3 1 mg/m3
Zinc oxide	2 mg/m3 Respirable Fraction 15 mg/m3 Total Dust 5 mg/m3 Respirable Fraction
Graphite	2 mg/m3 Respirable Fraction 15 mg/m3 Total Dust 5 mg/m3 Respirable Fraction
Cellulose Fiber	10 mg/m3 15 mg/m3 Total Dust 5 mg/m3 Respirable Fraction
Magnesium Oxide	10 mg/m3 Inhalable Fraction 15 mg/m3, fume
Iron Oxide	5 mg/m3 Respirable Fraction 10 mg/m3, fume
Phenol	5 ppm 5 ppm

Appropriate engineering controls: □se □ith ade□uate local exhaust □entilation and dust collection as necessar□ to maintain the concentration of airborne dust belo□ the exposure limits□

Individual protection measures, such as personal protective equipment (PPE)
Respiratory Protection: If the concentrations exceed the Threshold □imit □alues □T□□□, a □IO□□ appro□ed particulate respirator appropriate for the exposure le□els should be □orn□ □elect based on consideration of the airborne □or□place concentrations and duration of exposure□□elect and use respirators in accordance □ith 2□ CFR 1□10□13□, A□□I Z□□□2, the □IO□□ Respirator Decision □ogic and good industrial h□giene practice□ For firefighting, use self□contained breathing apparatus□

Skin Protection: Glo□es recommended for handling bra□e parts□

Eye Protection: □afet□glasses recommended□

Other: □ ear protecti□e clothing as needed to a□oid s□in contact□

9. Physical and Chemical Properties

Appearance (physical state, color, etc.): Metallic parts with gray friction material.
Odor: No odor

Odor threshold: □ot applicable	**pH:** □ot applicable
Melting point/freezing point: □ot applicable	**Boiling point:** □ot applicable
Flash point: □ot applicable	**Evaporation rate:** □ot applicable
Flammability (solid, gas): □ot flammable	
Flammable limits: LEL: □ot applicable	**UEL:** □ot applicable
Vapor pressure: □ot applicable	**Vapor density:**
Relative density□2□2 □3□55 g/cc	**Solubility(ies): I**nsoluble
Partition coefficient: n-octanol/water: □ot applicable	**Auto-ignition temperature:** □ot applicable
Decomposition temperature: □ot applicable	**Viscosity:** □ot applicable

10. Stability and Reactivity

Reactivity: □ot expected to be reacti□e under normal conditions of use□
Chemical stability: □table□
Possibility of hazardous reactions: □one □no□n□
Conditions to avoid: □one □no□n□
Incompatible materials: □one □no□n□
Hazardous decomposition products: Combustion products from organic resins ma□include carbon monoxide, carbon dioxide, nitrogen oxides, sulfur dioxide, aldeh□des, phenols, c□anide, ammonia and □arious h□drocarbons□

11. Toxicological Information

Eye Contact: Dust from product ma□cause abrasi□e irritation and con□uncti□itis□

Skin Contact: Prolonged contact □ith dust from product ma□cause irritation, dermatitis and sensiti□ation□

Inhalation: Inhalation of dust ma□cause irritation to the nose, throat and upper respirator□tract □ith coughing and shortness of breath□

Ingestion: □ot a normal route of exposure□□□allo□ing large amounts of dust ma□cause o□erexposure to antimon□□ith s□mptoms including gastrointestinal irritation, sores in the mouth and nose, headache, di□□iness, □eight loss and acute congestion of the heart, li□er and □idne□s□

Chronic Health Effects□ Inhalation of excessi□e concentrations of an□dust, including dust from this material, ma□ cause lung in□ur□□Prolonged o□erexposure to respirable cr□stalline silica ma□cause lung disease □silicosis□and increase the ris□ of lung cancer□O□erexposure to antimon□ma□cause degenerati□e changes of the li□er and □idne□s□Prolonged inhalation of nic□el dust or fumes ma□cause perforation of the nasal septum and lung damage□

Carcinogenicity: □ic□el compounds are classified b□IARC as □no□n human carcinogens □Group 1□and b□□TP as □no□n human carcinogens□Metallic nic□el is classified b□IARC as possibl□carcinogenic to humans □Group 2B□ and b□□TP as reasonabl□anticipated to be a carcinogen□Cr□stalline silica □uart□is listed as □Carcinogenic to □umans□□Group 1□b□IARC and □□no□n to be a □uman Carcinogen" b□□TP□Titanium dioxide is listed b□IARC as a group 2B carcinogen □possible human carcinogen□□Diantimon□Trisulfide is classified as a carcinogen categor□2 b□the □□ C□P□□one of the other components of this product are listed as a carcinogen or suspected carcinogen b□ IARC, □TP, ACGI□ or O□□A□

Acute Toxicity Values□No acute toxicity data for the product.
□on□ha□ardous ingredients□□o data a□ailable
Barium □ulfate□Oral rat □D50□30□000 mg/□g
□□nthetic Graphite□Oral rat □D50 □2000 mg/□g, inhalation rat □C50 □2 mg/□
Magnesium Oxide□□o data a□ailable
□atural Graphite□Oral rat □D50 □2000 mg/□g, inhalation rat □C50 □2 mg/□
Iron Oxide□Oral rat □D50 □10000 mg/□g
Cellulose□□o data a□ailable
Diantimon□Trisulfide□Oral rat □D50 □2000 mg/□g, inhalation rat □C50 □5□0□mg/□, dermal rat □D50 □2000 mg/□g

12. Ecological Information

Ecotoxicity: No toxicity data for the product.
Barium □ulfate□Danio rerio □C50 □3□5 mg/□/□□hr
□□nthetic Graphite□Danio rerio □C50 □100 mg/□/□□hr
□atural Graphite□Danio rerio □C50 □100 mg/□/□□hr
Iron Oxide: Danio rerio LC0 ≥ 50000 mg/L/96hr

This product is not anticipated to ha□e an ad□erse effect on the en□ironment□

Persistence and degradability: Biodegradation is not applicable to inorganic substances□
Bioaccumulative potential: Bioaccumulation is not expected□
Mobility in soil: □o data a□ailable□
Other adverse effects: □o data a□ailable□

13. DISPOSAL CONSIDERATIONS

□andfill in compliance □ith all applicable Federal, state and local regulations□

14. Transport Information

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT	□one	□ot Regulated	□one	□one	□ot applicable
TDG	□one	□ot Regulated	□one	□one	□ot applicable
IMDG	□one	□ot Regulated	□one	□one	□ot applicable
IATA	□one	□ot Regulated	□one	□one	□ot applicable

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): □ot applicable □ product is transported onl□in pac□aged form□

Special precautions: □one □no□n

15. Regulatory Information

U.S. REGULATIONS:
Comprehensive Environmental Response and Liability Act of 1980 (CERCLA) Reportable Quantity:
This product is not sub□ect to C□RC□A reporting re□uirements□ho□e□er, man□states ha□e more stringent release reporting re□uirements□Report spills re□uired under federal, state and local regulations□

Toxic Substances Control Act (TSCA): Manufactured articles are not sub□ect to T□CA□These products are manufactured □ith chemicals listed on the T□CA in□entor□□

Superfund Amendments and Reauthorization Act (SARA) Title III Information:
SARA Section 311/312 Hazard Categories□Dela□ed □ealth
This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313:

Name	CAS	%
Chromium	□□□0□□□3	0□5
□ic□el	□□□0□02□0	0□2

INTERNATIONAL REGULATIONS:

Canadian Environmental Protection Act: Manufactured articles are exempt from notification re□uirements under C□PA□

16. Other Information

NFPA Ratings: □ealth□1 Flammabilit□□0 Instabilit□□0

HMIS Ratings: □ealth□1□ Flammabilit□□0 Ph□sical □a□ard□0
□Chronic □ealth □a□ard

SDS Revision History: □pdated all sections to compl□□ith G□□
Date of preparation: □/2□/15
Date of last revision: 5/1□/10

The information herein is belie□ed to be accurate, ho□e□er, Masu Brake Pads Pvt. Ltd. ma□es no representation or □arrant□as to its accurac□□The data is furnished gratuitousl□and independentl□of an□sale of the product, and onl□ for customer in□estigation and independent □erification□Masu Brake Pads Pvt. Ltd. shall in no e□ent be responsible for an□damages of □hate□er nature directl□or indirectl□resulting from the publication or use of or reliance upon data

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