



SAFETY DATA SHEET

SAFETY DATA SHEET NUMBER: ABS-BP-SDS-1

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Integrally Molded Brake Pad
MANUFACTURER / SUPPLIER: ABS Friction Inc.
55 Taggart Street
Guelph, ON
Canada, N1L 1M9
EMERGENCY PHONE NUMBER: (519) 763-9000
8:30 AM to 4:30 PM ET
www.absfriction.com
PRODUCT USE: Vehicle brake pad
DATE OF PREPARATION: August 20, 2015

SECTION 2 – HAZARDS IDENTIFICATION

CLASSIFICATION: This product meets the OSHA definition of an “article”, therefore the OSHA Hazard Communication Standard can be considered inapplicable.
As a manufactured article, this product is not subject to WHMIS

GHS LABEL SYMBOL: None
HAZARD STATEMENTS: None
PRECAUTIONARY STATEMENTS: None

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY	CONCENTRATION (PERCENT WEIGHT/WEIGHT)	CAS NUMBER
Aluminum oxide	>1%	1344-28-1
Barium sulfate	>1%	7727-43-7
Copper	>1%	7440-50-8
Zinc	>1%	7440-66-6
Carbon fibre	>1%	7440-44-0
Alkaline-earth silicate wool	>1%	436083-99-7
Graphite	>1%	7782-42-5
Cellulose	>1%	9004-34-6
Iron	>1%	7439-89-6
Magnesium oxide	>1%	1309-48-4
Iron oxide	>1%	1309-37-1
Calcium hydrate silicate	>1%	1344-95-2
Steel fibre	>1%	7439-89-6
Crystalline silica (quartz)	>1%	14808-60-7

Kaolin	<1%	1332-58-7
Phenol	<1%	108-95-2
Lead	<0.1%	7439-92-1

Remaining ingredients are either non-hazardous, or are contained within this product below de minimis concentrations.

THIS PRODUCT CONTAINS NO ASBESTOS

SECTION 4 - FIRST AID MEASURES

INHALATION:	If symptoms are experienced (e.g. cough, irritation, etc.), remove victim to fresh air. If irritation persists, seek medical attention.
SKIN CONTACT:	In case of irritation, remove contaminated clothing and flush affected areas with water. If irritation persists, seek medical attention.
EYE CONTACT:	Remove any contact lenses. Immediately and continuously flush eyes with plenty of water for at least 15 minutes. If irritation persists, seek medical attention.
INGESTION:	Seek medical attention.
PERSONAL PROTECTIVE EQUIPMENT FOR FIRST AID RESPONDERS:	Not applicable

SECTION 5 – FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:	Water spray, dry chemical, carbon dioxide, or foam.
HAZARDOUS COMBUSTION PRODUCTS:	May release traces of ammonia
SPECIAL PROTECTIVE ACTIONS FOR FIREFIGHTERS:	As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing. Keep adjacent containers cool by spraying with water.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:	Wear appropriate personal protective equipment – refer to Section 8 for more information. This would include a particulate respirator if airborne dust is generated.
ENVIRONMENTAL PRECAUTIONS:	Not applicable
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:	Avoid generating dust from this product. Clean up using methods that do not generate dust such as HEPA vacuum or wet clean up. Avoid using compressed air for removal of dust.

SECTION 7 – HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT:	Handle in accordance with good industrial hygiene and safety practices. Minimize dust generation. Use adequate ventilation if dust is generated. Avoid contact with skin and eyes.
STORAGE REQUIREMENTS:	Store the product in a dry area as contact with moisture may promote rust.
SENSITIVITY TO MECHANICAL IMPACT:	Not sensitive
SENSITIVITY TO STATIC DISCHARGE:	Not sensitive

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:	Occupational Exposure Limits (OEL)	
	<i>ACGIH^a</i>	<i>OSHA PEL</i>
	<i>TLV-TWA^b</i>	<i>TWA^b</i>
Aluminum oxide	1 mg/m ³ Respirable Fraction	15 mg/m ³ Total Dust 5 mg/m ³ Respirable Fraction
Barium sulfate	5 mg/m ³ Inhalable Fraction	15 mg/m ³ Total Dust 5 mg/m ³ Respirable Fraction
Calcium hydrate silicate	10 mg/m ³	15 mg/m ³
Cellulose	10 mg/m ³	15 mg/m ³ Total Dust 5 mg/m ³ Respirable Fraction
Copper	1 mg/m ³	1 mg/m ³
Crystalline silica, quartz	0.025 mg/m ³ Respirable Fraction	$\frac{10 \text{ mg/m}^3}{\% \text{SiO}_2 + 2}$ Respirable
Graphite	2 mg/m ³ Respirable Fraction	15 mg/m ³ Total Dust 5 mg/m ³ Respirable Fraction
Iron oxide	5 mg/m ³ Respirable Fraction	10 mg/m ³ , fume
Kaolin	2 mg/m ³ Respirable Fraction	15 mg/m ³ Total Dust 5 mg/m ³ Respirable Fraction
Lead	0.05 mg/m ³	0.05 mg/m ³
Magnesium oxide	10 mg/m ³ Inhalable Fraction	15 mg/m ³ , fume
Phenol	5 ppm	5 ppm
Zinc oxide	2 mg/m ³ Respirable Fraction	15 mg/m ³ Total Dust 5 mg/m ³ Respirable Fraction

a – American Conference of Governmental Industrial Hygienists, 2015

b – Threshold Limit Value - Time Weighted Average (i.e. 8 hours)

b – US Occupational Safety and Health Administration Permissible Exposure Limit

c – Time Weighted Average (i.e. 8 hours) Limit

Consult your local regulatory agency for the occupational exposure limit in effect in your jurisdiction.

GLOVES (SPECIFY):

Individuals with sensitive skin should wear protective gloves and clothing that covers any skin that may come into repeated or prolonged contact with this product or any dust generated from this product.

RESPIRATOR (SPECIFY):

Respirator use not likely required under normal conditions of use. Conduct an assessment of the potential for worker exposure. If a respirator is required, a filtering-facepiece or half-facepiece respirator equipped with particulate cartridges should be sufficient depending on the results of air monitoring in the workplace.

See CSA Standard Z94.4-11 "Selection Care and Use of Respirators" or the "NIOSH Guide to the Selection and Use of Particulate Respirators (1996)" for additional information.

EYE (SPECIFY):

Avoid eye contact. Wear safety glasses with side shields or goggles if airborne dust is generated. See CSA Standard Z94.3-07 (R2012) "Eye and Face Protectors" or ANSI/ISEA Z87.1-2010 "American National Standard for Occupational and Educational Personal Eye and Face Protection Devices" for additional information.

FOOTWEAR (SPECIFY):

As required

OTHER EQUIPMENT (SPECIFY):
ENGINEERING CONTROLS (E.G. VENTILATION, ENCLOSED PROCESS, SPECIFY):

Not applicable
 If user operations generate airborne dust, use ventilation to keep exposure to airborne contaminants below applicable exposure limits.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Solid
ODOUR AND APPEARANCE:	Solid disc brake pad light grey to black appearance with a friction material odour
ODOUR THRESHOLD:	Not available
SPECIFIC GRAVITY (WATER=1):	2.02 – 3.05
SOLUBILITY IN WATER	Insoluble
CO-EFFICIENT OF WATER/OIL DISTRIBUTION:	Not applicable
VAPOUR PRESSURE:	Not applicable
BOILING POINT (°C):	Not applicable
MELTING/FREEZING POINT (°C):	Not applicable
PH:	Not applicable
VAPOUR DENSITY (AIR=1):	Not applicable
EVAPORATION RATE (BUTYL ACETATE=1):	Not applicable
FLASHPOINT (°C) AND METHOD:	Not applicable
UPPER FLAMMABLE LIMIT (%):	Not applicable
LOWER FLAMMABLE LIMIT (%):	Not applicable
AUTO-IGNITION TEMPERATURE (°C):	Not available
DECOMPOSITION TEMPERATURE (°C):	Not available

SECTION 10 – STABILITY AND REACTIVITY

REACTIVITY:	Stable under normal conditions of use
CHEMICAL STABILITY:	Normally stable. Hazardous polymerization will not occur.
CONDITIONS TO AVOID:	None
INCOMPATIBLE MATERIALS:	Not available
HAZARDOUS DECOMPOSITION PRODUCTS:	Not available

SECTION 11 – TOXICOLOGICAL INFORMATION

ROUTE OF ENTRY:	<input checked="" type="checkbox"/> Skin Contact <input type="checkbox"/> Skin Absorption <input checked="" type="checkbox"/> Eye Contact <input checked="" type="checkbox"/> Inhalation <input type="checkbox"/> Ingestion
ACUTE TOXICITY:	Not available for this product Aluminum Oxide: LD ₅₀ greater than 2,000 mg/kg oral/rat Iron Oxide: LD ₅₀ greater than 10,000 mg/kg oral/rat Magnesium Oxide: LD ₅₀ - No standard animal toxicity value was found

Barium Sulfate: LD₅₀ - No standard animal toxicity value was found
 Copper: LD₅₀ - No standard animal toxicity value was found
 Lead: LD₅₀ - 105 mg/kg oral/rat
 Zinc oxide: LD₅₀ - greater than 5,000 mg/kg oral/rat
 Kaolin: LD₅₀ - greater than 5,000 mg/kg oral/rat
 Phenol: LD₅₀ - 340 mg/kg oral/rat

SKIN CORROSION/IRRITATION:	May be irritating to the skin.
SERIOUS EYE DAMAGE/IRRITATION:	May be irritating to the eyes.
RESPIRATORY OR SKIN SENSITIZATION:	Not available
INTERACTIVE EFFECTS:	Not available
MUTAGENICITY:	Not available
CARCINOGENICITY:	<p>This product has not been listed as a carcinogen or a potential carcinogen by the ACGIH, the International Agency for Research on Cancer (IARC), the US National Toxicology Program (NTP) or the US Occupational Safety and Health Administration (OSHA).</p> <p>IARC lists crystalline silica as a Group 1 carcinogen (i.e., carcinogenic in humans, with sufficient epidemiological evidence). ACGIH has classified crystalline silica (quartz and cristobalite) as an A2 suspected human carcinogen (i.e., limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals with relevance to humans).</p> <p>Silica is also listed as known to be a human carcinogen by the United States National Toxicology Program (NTP).</p>
REPRODUCTIVE TOXICITY:	Not available
SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:	Not available
SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:	<p>May cause respiratory irritation.</p> <p>Long term overexposure to <u>respirable</u> crystalline silica may result in a lung disease known as silicosis. Silicosis is characterized by progressive scarring (or fibrosis) of the lungs and is marked by shortness of breath and impaired lung function. As well as cardiac and respiratory failure, advanced silicosis increases the risk of developing tuberculosis and lung cancer.</p> <p>Chronic exposure (ie. inhalation of iron oxide dust or fume) can cause a benign pneumoconiosis called “Siderosis”.</p> <p>Inhalation of fine particles of aluminum has been reported to result in pulmonary fibrosis.</p>
ASPIRATION HAZARD:	Not available. Not expected to be of concern.

SECTION 12 – ECOLOGICAL INFORMATION

ECOTOXICITY:	Not available
PERSISTENCE / DEGRADABILITY:	Not available
BIOACCUMULATION / ACCUMULATION:	Not available
MOBILITY IN ENVIRONMENTAL MEDIA:	Not available
OTHER ADVERSE EFFECTS:	Not available

SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL:	Waste should be disposed of in accordance with local provincial/state, and federal requirements.
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SECTION 14 – TRANSPORTATION INFORMATION

UN NUMBER:	Not a Transportation of Dangerous Goods (Canada) or Department of Transport (United States) controlled material
UN PROPER SHIPPING NAME:	Not applicable

TRANSPORT HAZARD CLASSES:	Not applicable
PACKING GROUP:	Not applicable
ENVIRONMENTAL HAZARDS:	Not applicable
SPECIAL PRECAUTIONS FOR USER:	Not applicable

SECTION 15 – REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200:	This product meets the OSHA definition of an “article”, therefore the OSHA Hazard Communication Standard can be considered inapplicable.
SARA TITLE III SECTION 311/312:	This product contains substances regulated under OSHA Hazard Communication Standard 29 CFR1910.1200 at or above OSHA de minimis quantities.
SARA TITLE III SECTION 313):	If per Section 2 of this MSDS this product contains Copper (CAS # 7440-50-8) then it is subject to the reporting requirements (i.e. at or above de minimis quantities) of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) 40 CFR 372.
TSCA:	All ingredients in this product are either included in EPA’s Toxic Substance Control Act Inventory of Chemical Substances or exempt as naturally-occurring materials (Mica and Mineral Wool).
CANADIAN ENVIRONMENTAL PROTECTION ACT:	Manufactured articles are exempt from notification requirements under CEPA
CANADIAN WHMIS CLASSIFICATION:	Manufactured articles are not subject to WHMIS
EUROPEAN INVENTORY OF COMMERCIAL CHEMICAL SUBSTANCES:	Manufactured articles are exempt from notification requirements
EUROPEAN COMMUNITY LABELING CLASSIFICATION:	Not Applicable
EUROPEAN COMMUNITY RISK AND SAFETY PHRASES:	None

SECTION 16 – OTHER INFORMATION

SDS VERSION#: August 20, 2015 (Version #2)

Information presented herein has been compiled from information provided to us by our suppliers and other sources considered dependable and is therefore 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 of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.