

Friction pad *4512* (302-series)

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 03/01/2016 Date of issue: 03/01/2016

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Friction pad *4512* (302-series)

1.2. Intended Use of the Product Brake and Clutch friction materials.

1.3. Name, Address, and Telephone of the Responsible Party Company

The Montalvo Corporation

50 Hutcherson Drive,

Gorham, Me. 04038

Telephone: (800) 226-8710

1.4. Emergency Telephone Number

Emergency Number : (800) 226-8710

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS-US classification

Not classified

This product is in its final, solid, polymerized form, with no leftover monomers available for exposure. The product in its final form is not hazardous. However, if dust or fumes are generated in downstream use this product may pose physical and health hazards. The information contained within this SDS is about the potential physical and health hazards in the event that the product is machined, ground, or otherwise altered, and dust, fumes, particles, or other methods of exposure are possible in downstream use.

Label Elements

GHS-US Labeling No labeling applicable

Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Dust may cause mechanical irritation to eyes, nose, throat, and lungs.

Unknown Acute Toxicity (GHS-US)

5 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Oral, Dermal, Inhalation (Dust/Mist))

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Proprietary Component 1	(CAS No) Proprietary	10 - 30	Comb. Dust Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317 STOT SE 3, H335
Proprietary Component 2	(CAS No) Proprietary	10 - 30	Comb. Dust Skin Sens. 1, H317
Proprietary Component 3	(CAS No) Proprietary	10 - 30	Comb. Dust STOT RE 2, H373
Proprietary Component 4	(CAS No) Proprietary	7 - 13	Not classified
Proprietary Component 5	(CAS No) Proprietary	7 - 13	Acute Tox. 4 (Inhalation:dust,mist), H332 STOT RE 1, H372 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Proprietary Component 6	(CAS No) Proprietary	7 - 13	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:dust,mist), H331 Aquatic Acute 3, H402

Friction pad *4512* (302-series)

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Proprietary Component 7	(CAS No) Proprietary	7 - 13	Comb. Dust
Proprietary Component 8	(CAS No) Proprietary	3 - 7	Not classified
Proprietary Component 9	(CAS No) Proprietary	1 - 5	Comb. Dust

Full text of H-phrases: see section 16

The specific chemical identity and/or exact percentage of composition has been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200]. In the event of an emergency, chemical identities and exact percentages of the proprietary ingredients may need to be disclosed to emergency personnel upon request.

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: Using proper respiratory protection, move the exposed person to fresh air at once. Encourage exposed person to cough, spit out, and blow nose to remove dust. Immediately call a poison center, physician, or emergency medical service.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: None expected under normal conditions of use. Dust or fumes from processing/altering the product: May cause eye irritation. May cause skin irritation. May cause respiratory irritation. Harmful if swallowed. Harmful if inhaled. Skin sensitization. Chronic exposure to dust may cause damage to organs (lungs) through prolonged or repeated exposure (inhalation).

Symptoms/Injuries After Inhalation: Not expected to present a significant inhalation hazard under anticipated conditions of normal use. Inhalation is likely to cause adverse health effects including but not limited to: irritation, difficulty breathing, and unconsciousness. Irritation of the respiratory tract and the other mucous membranes. Dust may be harmful or cause irritation.

Symptoms/Injuries After Skin Contact: None expected under normal conditions of use. Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction. Direct contact may cause irritation by mechanical abrasion.

Symptoms/Injuries After Eye Contact: None expected under normal conditions of use. Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: None expected under normal conditions of use. This material is harmful orally and can cause adverse health effects or death in significant amounts.

Chronic Symptoms: None expected under normal conditions of use. Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation).

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: If excessive dust is generated from processing, it may present a dust explosion hazard when dispersed in air at sufficient quantities in the presence of an ignition source.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. Do not breathe fumes from fires or vapors from decomposition. Do not allow run-off from firefighting to enter drains or water courses.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not breathe dust. Avoid generating dust. Do not get in eyes, on skin, or on clothing. Remove ignition sources. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

Friction pad *4512* (302-series)

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area. Avoid generation of dust during clean-up of spills.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal. For particulates and dust: Vacuum clean-up is preferred. If sweeping is required use a dust suppressant. Use only non-sparking tools. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Accumulation and dispersion of dust with an ignition source can cause a combustible dust explosion. Keep dust levels to a minimum and follow applicable regulations.

Precautions for Safe Handling: Final product is inert, if dust is produced: Avoid creating or spreading dust. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Use in a well-ventilated area. Keep away from heat, sparks, open flames, hot surfaces. No smoking.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. If excessive dust is generated during downstream use: Avoid creating or spreading dust.

Storage Conditions: Store in a dry, cool place. Keep/Store away from contaminants.

Incompatible Products: Strong acids, strong bases, strong oxidizers. Reducing agents. Cyanides. Active metals.

7.3. Specific End Use(s) Brake and Clutch friction materials

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Proprietary Component 4 (Proprietary)		
USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³ (inhalable fraction, particulate matter containing no asbestos and <1% crystalline silica)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	10 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
Proprietary Component 9 (Proprietary)		
USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³ (all forms except Proprietary Component 9 fibers-respirable fraction)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	2.5 mg/m ³ (natural-respirable dust)
USA IDLH	US IDLH (mg/m ³)	1250 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (synthetic-total dust) 5 mg/m ³ (synthetic-respirable fraction)

Friction pad *4512* (302-series)

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

8.2. Exposure Controls

Appropriate Engineering Controls

: The following applies to the product if it is cut, sanded or altered in such a way that excessive and/or significant particulates and/or dusts may be generated: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure, but are not required. Ensure adequate ventilation, especially in confined areas. Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits. Power equipment should be equipped with proper dust collection devices. Prevent dust accumulation (to minimize explosion hazard).

Personal Protective Equipment

: Not generally required. The use of personal protective equipment may be necessary as conditions warrant. Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

Hand Protection

: Not required for normal conditions of use.

Eye Protection

: Wear protective gloves.

Skin and Body Protection

: ANSI Z87 approved tightly fitting safety glasses.

Respiratory Protection

: Wear suitable protective clothing.

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information

: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Gray
Odor	: None
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20 °C	: No data available
Relative Density	: No data available
Specific Gravity	: 1.6
Solubility	: Not soluble in water.
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

9.2. Other Information

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Hazardous reactions will not occur under normal conditions.

10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Friction pad *4512* (302-series)

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, and incompatible materials. Sparks, heat, open flame and other sources of ignition.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers. Reducing agents. Cyanides. Active metals.

10.6. Hazardous Decomposition Products: Thermal decomposition generates : Carbon oxides (CO, CO₂). Nitrogen oxides. Silicon oxides. Formaldehyde. Formaldehyde is a potential carcinogen and can act as a potential skin and respiratory sensitizer. Formaldehyde can also cause respiratory and eye irritation. Hydrogen fluoride. Fluorine compounds. Metal oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Oral: Not classified. Inhalation:dust,mist: Not classified.

Proprietary Component 1 (Proprietary)	
LD50 Oral Rat	> 5 g/kg
LD50 Dermal Rabbit	> 2 g/kg
Proprietary Component 4 (Proprietary)	
LD50 Oral Rat	> 5000 mg/kg
Proprietary Component 5 (Proprietary)	
LD50 Oral Rat	> 5 g/kg
LD50 Dermal Rat	> 2000 mg/kg
LC50 Inhalation Rat	4.47 mg/l/4h
Proprietary Component 6 (Proprietary)	
LD50 Oral Rat	125 mg/kg
LC50 Inhalation Rat	1.814 mg/l/4h
ATE (Dermal)	300.00 mg/kg body weight
ATE (Dust/Mist)	0.50 mg/l/4h

Skin Corrosion/Irritation: Not classified.

Serious Eye Damage/Irritation: Not classified.

Respiratory or Skin Sensitization: Not classified.

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Proprietary Component 7 (Proprietary)	
IARC group	3
Proprietary Component 6 (Proprietary)	
IARC group	3

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified.

Specific Target Organ Toxicity (Repeated Exposure): Not classified.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Not expected to present a significant inhalation hazard under anticipated conditions of normal use. Inhalation is likely to cause adverse health effects including but not limited to: irritation, difficulty breathing, and unconsciousness. Irritation of the respiratory tract and the other mucous membranes. Dust may be harmful or cause irritation.

Symptoms/Injuries After Skin Contact: None expected under normal conditions of use. Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction. Direct contact may cause irritation by mechanical abrasion.

Symptoms/Injuries After Eye Contact: None expected under normal conditions of use. Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: None expected under normal conditions of use. This material is harmful orally and can cause adverse health effects or death in significant amounts.

Chronic Symptoms: None expected under normal conditions of use. Chronic exposure to dust may cause damage to organs (lungs) through prolonged or repeated exposure (inhalation).

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General

: The ecotoxicological information applies to the materials bound within the product. The bound materials are unlikely to pose a threat to the environment. If the product is altered in anyway and the dust/shavings/fines are released to the environment the below hazards may apply. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Friction pad *4512* (302-series)

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Proprietary Component 5 (Proprietary)	
EC50 Daphnia 1	5 mg/l (Exposure time: 48 h - Species: Daphnia pulex)
NOEC chronic algae	5 mg/l

Proprietary Component 6 (Proprietary)	
LC50 Fish 1	65 mg/l (Exposure time: 96 h - Species: Poecilia reticulata [static])

12.2. Persistence and Degradability

Friction pad *4512* (302-series)	
Persistence and Degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative Potential

Friction pad *4512* (302-series)	
Bioaccumulative Potential	Not established.

Proprietary Component 5 (Proprietary)	
BCF fish 1	(no bioaccumulation)

12.4. **Mobility in Soil** No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations. local, regional, national, territorial, provincial, and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology – Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

14.1. **In Accordance with DOT** Not regulated for transport

14.2. **In Accordance with IMDG** Not regulated for transport

14.3. **In Accordance with IATA** Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

Proprietary Component 1 (Proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Proprietary Component 8 (Proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Proprietary Component 2 (Proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Proprietary Component 4 (Proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Proprietary Component 5 (Proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Proprietary Component 3 (Proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Proprietary Component 9 (Proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Proprietary Component 7 (Proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Proprietary Component 6 (Proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2 US State Regulations

Proprietary Component 4 (Proprietary)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) List	

Friction pad *4512* (302-series)

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Proprietary Component 9 (Proprietary)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Proprietary Component 6 (Proprietary)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 03/01/2016
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Comb. Dust	Combustible Dust
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
Skin Sens. 1B	Skin sensitization Category 1B
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
Comb. Dust	May form combustible dust concentrations in air
H301	Toxic if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)