

# Friction pad \*4511\* (301-series)

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations  
Revision Date: 06/22/2016 Date of Issue: 06/22/2016

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Friction pad \*4511\* (301-series)

#### 1.2. Intended Use of the Product

**Use of the Substance/Mixture:** Brake and Clutch friction material

#### 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

#### 2.1. 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.

#### 2.2. Label Elements

##### GHS-US Labeling

No labeling applicable

#### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Dust may cause mechanical irritation to eyes, nose, throat, and lungs. Repeated or prolonged exposure to dust particles may result in fibrosis (Pneumoconiosis).

#### 2.4. Unknown Acute Toxicity (GHS-US)

No data available

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Proprietary RM3	(CAS No) Proprietary	19-25	Not classified
Proprietary RM8	(CAS No) Proprietary	12-19	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Proprietary RM 4	(CAS No) Proprietary	6-13	Comb. Dust Skin Sens. 1, H317
Proprietary RM1	(CAS No) Proprietary	7-15	Comb. Dust Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317 STOT SE 3, H335
Proprietary RM5	(CAS No) Proprietary	4-10	Not classified
Proprietary RM6	(CAS No) Proprietary	7-15	Not classified
Proprietary RM12	(CAS No) Proprietary	1-5	Comb. Dust
Proprietary RM11	(CAS No) Proprietary	1-5	Comb. Dust STOT RE 2, H373
Proprietary RM2	(CAS No) Proprietary	2-7	Comb. Dust

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Proprietary RM9	(CAS No) Proprietary	2-6	Carc. 2, H351
Proprietary RM10	(CAS No) Proprietary	1-5	Acute Tox. 4 (Inhalation:dust,mist), H332 STOT RE 1, H372 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

Full text of H-phrases: see section 16

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200]

## 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 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 5 minutes. Obtain medical attention if irritation develops or persists.

**First-aid Measures After Eye Contact:** Rinse cautiously with water for at least 5 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. If downstream processing/alteration occurs and dust or fines are produced, the hazards listed in this section are applicable.

**Symptoms/Injuries After Inhalation:** Not expected to present a significant inhalation hazard under anticipated conditions of normal use. Dust may be harmful or cause irritation. 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.

**Symptoms/Injuries After Skin Contact:** None expected under normal conditions of use. May cause an allergic skin reaction. Redness, pain, swelling, itching, burning, dryness, and dermatitis. 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 fire-fighting to enter drains or water courses.

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

**Hazardous Combustion Products:** Carbon oxides (CO, CO<sub>2</sub>). Nitrogen 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. Metal oxides. Sulfur oxides. Hydrocarbons. Silicon oxides. Smoke.

**Other Information:** Risk of dust explosion.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

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

#### 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 Personnel

**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 Materials 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. Contact competent authorities after a spill. Use explosion proof vacuum during cleanup, with appropriate filter. Do not mix with other materials. Vacuum clean-up is preferred. If sweeping is required use a dust suppressant. Use only non-sparking tools.

### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for 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:** 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: 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 only in well ventilated areas. 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. Avoid creating or spreading dust.

**Storage Conditions:** Store in a dry, cool place.

**Incompatible Products:** Strong acids, strong bases, strong oxidizers.

### 7.3. Specific End Use(s)

Brake and Clutch friction material

## 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 RM6		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (inhalable fraction, particulate matter containing no asbestos and <1% crystalline silica)
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable dust)
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)
Proprietary RM 12 (Proprietary)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> (all forms except Proprietary RM 12 fibers-respirable fraction)
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup> (natural-respirable dust)
USA IDLH	US IDLH (mg/m <sup>3</sup> )	1250 mg/m <sup>3</sup>

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<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (synthetic-total dust) 5 mg/m <sup>3</sup> (synthetic-respirable fraction)
<b>Proprietary RM8</b>		
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (fume)

## 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. 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. Insufficient ventilation: wear respiratory protection. Protective safety glasses.



### Materials for Protective Clothing

: Not required for normal conditions of use.

### Hand Protection

: Wear protective gloves.

### Eye Protection

: ANSI Z87 approved tightly fitting safety glasses.

### Skin and Body Protection

: Wear suitable protective clothing.

### Respiratory Protection

: 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	: Grey
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	: 1.96
Solubility	: No data available
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).

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

**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.

**10.6. Hazardous Decomposition Products:** Thermal decomposition generates: Carbon oxides (CO, CO<sub>2</sub>). Hydrocarbons. Nitrogen 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. Metal oxides. Sulfur oxides. Silicon oxides. Smoke.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects

**Acute Toxicity:** Not classified

Proprietary RM1	
LD50 Oral Rat	> 5 g/kg
LD50 Dermal Rabbit	> 2 g/kg
Proprietary RM5	
LD50 Oral Rat	> 2 g/kg
LC50 Inhalation Rat	> 5040 mg/m <sup>3</sup> (Exposure time: 4 h)
Proprietary RM6	
LD50 Oral Rat	> 5000 mg/kg
Proprietary RM9	
LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
LC50 Inhalation Rat	> 5.04 mg/l/4h
Proprietary RM10	
LD50 Oral Rat	> 5 g/kg
LD50 Dermal Rat	> 2000 mg/kg
LC50 Inhalation Rat	4.47 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 RM3	
IARC group	3
Proprietary RM9	
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. Dust may be harmful or cause irritation. 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.

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

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

**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).

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## 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.

<b>Proprietary RM10</b>	
<b>EC50 Daphnia 1</b>	5 mg/l (Exposure time: 48 h - Species: Daphnia pulex)
<b>NOEC Chronic Algae</b>	5 mg/l

### 12.2. Persistence and Degradability

<b>Friction pad *4511* (301-series)</b>	
<b>Persistence and Degradability</b>	Not established.

### 12.3. Bioaccumulative Potential

<b>Friction pad *4511* (301-series)</b>	
<b>Bioaccumulative Potential</b>	Not established.
<b>Proprietary RM10</b>	
<b>BCF Fish 1</b>	(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.

**Ecology - Waste Materials:** Avoid release to the environment.

## 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

<b>Proprietary RM1</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Proprietary RM2</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Proprietary RM 4</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Proprietary RM5</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Proprietary RM6</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Proprietary RM8</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Proprietary RM9</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Proprietary RM10</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Proprietary RM 12</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Proprietary RM11</b>

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

### 15.2. US State Regulations

#### Proprietary RM 12 (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 RM6

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

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

**Revision Date** : 06/22/2016  
**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200  
The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200]

### GHS Full Text Phrases:

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Carc. 2	Carcinogenicity 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. 1B	Skin sensitization Category 1B
Skin Sens. 1	Skin sensitization Category 1
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
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
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)