MATERIAL SAFETY DATA SHEET

ADDITIN RC 4211 (M 10.401) 419D/1676S

RHEIN CHEMIE CORPORATION
145 Parker Court
Chardon, OH 44024

TRANSPORTATION EMERGENCY
CALL CHEMTREC ..........: (800) 424-9300
INTERNATIONAL ...........: (703) 527-3887

NON-TRANSPORTATION
RCC EMERGENCY PHONE : (440) 285-3547
RCC INFORMATION PHONE: (800) 289-2436

Section 1: Product and Company Identification

Product Name: ADDITIN RC 4211 (M 10.401) 419D/1676S
Article Number: 2277033
Product Code: 002277033
Chemical Family: Solution of calcium sulphonate/carboxylate in mineral oil

Section 2: Composition/Information on Ingredients

HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient Name/ CAS Number</th>
<th>Exposure Limits</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OSHA (PEL):</td>
<td>Min.  Max.</td>
</tr>
<tr>
<td></td>
<td>5.00 mg/m3 TWA</td>
<td>30% 60%</td>
</tr>
<tr>
<td></td>
<td>ACGIH (TLV):</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10.00 mg/m3 STEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.00 mg/m3 TWA</td>
<td></td>
</tr>
</tbody>
</table>

Hydrotreated Light Paraffinic Distillates
CAS# is a trade secret
Exposure limit for: Oil mist, mineral

Magnesium Petroleum Sulfonate
61789-87-5
OSHA (PEL): Not Established
ACGIH (TLV): Not Established
5% 10%

Section 3: Hazards Identification

EMERGENCY OVERVIEW

CAUTION! Non-regulated. Color: Dark Brown, Brown Form: Liquid Odor:
Characteristic, Mild Odor
POTENTIAL HEALTH EFFECTS

Route(s) of Entry: Inhalation, Skin Contact, Eye Contact

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Inhalation Hazards
Acute Inhalation Hazards: Under normal working conditions, using good industrial hygiene practices, this material is not expected to pose an inhalation hazard.

Chronic Inhalation Hazards: None reported for this product as a whole. The hydrotreated light paraffinic distillate in this material can with repeated and prolonged contact cause fibrotic nodules, lipid pneumonia and lipid granuloma.

Skin Hazards
Acute Skin Hazards: Skin contact with this product may cause skin irritation with discomfort or rash.

Chronic Skin Hazards: None reported for this product as a whole.

Eye Hazards
Acute Eye Hazards: This product may cause some irritation with redness, tearing, and pain.

Chronic Eye Hazards: None reported for the product as a whole, expected to be similar to those listed for acute eye exposure.

Ingestion Hazards
Acute Ingestion Hazards: This product is moderately toxic by ingestion.

Chronic Ingestion Hazards: None reported for this product as a whole.

Carcinogenic Components:
NTP: None

IARC: None

OSHA: None

Medical Conditions
Aggravated by Exposure: May aggravate existing eye, skin or respiratory conditions.

Section 4: First Aid Measures

First Aid for Eye: In case of contact, flush eyes with large quantities of water for at least 15 minutes. The eyelids should be held apart during irrigation to ensure thorough flushing of all eye tissue. Call a physician immediately.

First Aid for Skin: Wash clothing and clean shoes before reuse. Immediately remove
contaminated clothing and shoes. Get medical attention if irritation develops or persists. In case of skin contact, wash affected areas with soap and water.

First Aid for Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

First Aid for Ingestion: Get medical attention.

Note to Physician: Treat symptomatically.

Section 5: Fire Fighting Measures

Flash Point: Approximately 356 °F (180 °C) ISO 2592

Flammable Limits:
- Upper Explosion Limit (UEL %): Not Established
- Lower Explosion Limit (LEL %): Not Established

Auto-ignition Temperature: Not Established

Extinguishing Media:
- Suitable: Carbon Dioxide, Dry Chemical, Foam

Special Fire Fighting Procedures: Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. Use cold water spray to cool fire exposed containers. During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion.

Unusual Fire/Explosion Hazards: None known.

Section 6: Accidental Release Measures

Spill or Leak Procedures: Emergency clean-up personnel should wear appropriate protection when entering the spill area for clean-up. Do not allow spilled or released material to enter ground water, waste water or soil. Notify local health authorities and other appropriate agencies if such contamination should occur. Place in properly marked containers for disposal. Vermiculite absorbent can be spread over the spill area to absorb as much of the remaining product as possible. Scoop up solid absorbent for waste disposal. Spill area can be washed with water. Ventilate area to remove vapors.

Section 7: Handling and Storage
Storage Temperature: Store at ambient conditions

Shelf Life: Not Established

Special Sensitivity: None known.

Handling/Storage Precautions: Keep away from heat, sparks and flames. Keep container tightly closed when not in use. Avoid breathing dusts, vapors or mists. Avoid contact with eyes and skin. Handle in accordance with good industrial hygiene and safety practices.

Section 8: Exposure Controls/Personal Protection

Personal Protection Equipment
Eye Protection Requirements: Safety glasses with side shields or goggles are recommended.

Skin Protection Requirements: Permeation resistant gloves (neoprene, nitrile, or PVC) and impervious clothing (long sleeve shirts) are recommended.

Ventilation Requirements: Use local exhaust ventilation if dusting or misting is a problem, to maintain air levels below the recommended exposure limit.

Respirator Requirements: The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA). Air purifying respirator equipped with a full-face organic vapor and dust/mist cartridge if vapors are near or exceeding the exposure limits listed in Section 2. In areas of high concentrations, confined space or other poorly ventilated areas and for large spill clean-up sites, fresh air-line respirators or self-contained breathing apparatus should be used. Observe OSHA regulations for respirator use (29 CFR 1910.134.)

Additional Protective Measures: Safety showers and eyewash stations should be accessible to the work area. Employees working with this product should not eat, drink, or use tobacco products in the work area.

Section 9: Physical and Chemical Properties

Physical Form: Liquid
Color: Dark Brown, Brown
Odor: Characteristic, Mild Odor
pH: Approximately 7.5 - 8.5 in 2% in TBN-solvent
Boiling Point: Not Established
Melting/Freezing Point: Not Applicable
Viscosity: 90 cm²/s (kinematic value) @ 104 °F (40 °C) DIN 51562
Solubility in Water: Essentially Insoluble
Solubility (non Aqueous): Soluble in mineral oils and synthetic base oils
Specific Gravity: Approximately 0.9 @ 68 °F (20 °C) DIN 51757
Bulk Density: Not Established
Vapor Pressure: Not Established
Vapor Density: Not Established
VOC by Weight: Not Established
HOC by Weight: None

**Section 10: Stability and Reactivity**

Stability: Stable
Hazardous Polymerization: Will not occur
Substances to Avoid: Strong bases and strong oxidants
Conditions to Avoid: High Heat.
Decomposition Products: By fire - CO, CO2, oxides of nitrogen, and other undetermined aliphatic fragments.

**Section 11: Toxicological Information**

**Toxicity Data for ADDITIN RC 4211 (M 10.401) 419D/1676S**
Acute oral toxicity: LD50 = > 2,000 mg/kg (Rat) Source: Supplier Material Safety Data Sheet (MSDS)

Eye Irritation: Slightly irritating (Rabbit) Source: Supplier Material Safety Data Sheet (MSDS)

Skin Irritation: Slightly irritating (Rabbit) Source: Supplier Material Safety Data Sheet (MSDS)

**Toxicity Data for Hydrotreated Light Paraffinic Distillates**
Toxicity Note: No data available for this component.

**Toxicity Data for Magnesium Petroleum Sulfonate**
Acute oral toxicity: LD50 = > 25 g/kg (Rat)

**Section 12: Ecological Information**

**Ecological Data for ADDITIN RC 4211 (M 10.401) 419D/1676S**
Ecological Note: Water Pollution Class WGK 2 - impairment of water quality (German Water Resources Act)

**Ecological Data for Hydrotreated Light Paraffinic Distillates**
Ecological Note: No data available for this component.

**Ecological Data for Magnesium Petroleum Sulfonate**
Ecological Note: Water Pollution Class WGK 2 - impairment of water quality (German Water Resources Act)
Section 13: Disposal Considerations

**Waste Disposal Method:**  Disposal must be in compliance with federal, state and local environmental control regulations.

**Empty Container Precautions:**  Empty container retains product residue and can be hazardous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat, flame, sparks, static electricity, or other sources of ignition. Recondition or dispose of empty container in accordance with government regulations.

Section 14: Transportation Information

**Technical shipping name:**  Lubricating Oil Additives

**Freight Class**
- **Bulk:**  Chemicals, N.O.I. (NMFC 60000)
- **Package:**  Chemicals, N.O.I. (NMFC 60000)

**Product Label:**  Product Label Established

**Domestic Surface Transportation (DOT)**
- **Hazard Class or Division:**  Non-Regulated

**Marine Transportation (IMO / IMDG)**
- **Hazard Class Division:**  Non-Regulated

**Air Transportation (ICAO / IATA)**
- **Hazard Class Division:**  Non-Regulated

Section 15: Regulatory Information

**United States Federal Regulations**

**OSHA Hazcom Standard Rating:**  Hazardous

**TSCA Inventory List:**  On TSCA Inventory

**CERCLA Hazardous Substance:**

<table>
<thead>
<tr>
<th>Component(s)</th>
<th>Reportable Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

**SARA Title III**

**SARA Section 302 Extremely Hazardous Substances:**

<table>
<thead>
<tr>
<th>Component(s)/CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min.</td>
</tr>
</tbody>
</table>
None

SARA Section 311/312 Hazard Categories:
Immediate Health Hazard

SARA Section 313 Toxic Chemicals:

<table>
<thead>
<tr>
<th>Component(s)/CAS Number</th>
<th>Reporting Threshold</th>
<th>Concentration Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RCRA Status:
If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

State Right-to-Know Information

<table>
<thead>
<tr>
<th>Component(s)</th>
<th>State Code</th>
<th>Concentration Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrotreated Light Paraffinic Distillates NJTSRN:000000955</td>
<td>PA-H, NJ-H, MA-H</td>
<td>30%</td>
<td>60%</td>
</tr>
<tr>
<td>Lanolin NJTSRN:000001159</td>
<td>PA-N, NJ-N</td>
<td>15%</td>
<td>40%</td>
</tr>
<tr>
<td>Oxidized petrolatum, calcium salts NJTSRN:000001164</td>
<td>PA-N, NJ-N</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td>Calcium Petroleum Sulfonate 61789-86-4</td>
<td>PA-N, NJ-N</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Magnesium Petroleum Sulfonate 61789-87-5</td>
<td>PA-N, NJ-N</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Sodium Petroleum Sulfonates 68608-26-4</td>
<td>PA-N, NJ-N</td>
<td>5%</td>
<td>10%</td>
</tr>
</tbody>
</table>

The following component(s) are listed under Massachusetts Extra-ordinary Hazards:
Hydrotreated Light Paraffinic Distillates NJTSRN:000000955 MA-X 30% 60%

State Code Translation Table

| PA-N | Pennsylvania Non-hazardous |
| PA-H | Pennsylvania Hazardous Substance List |
| NJ-N | New Jersey Other - includes predominant ingredients |
| NJ-H | New Jersey Hazardous Substance List |
| MA-H | Massachusetts Hazardous Substance List |
| MA-X | Massachusetts Extra-ordinary Hazardous Substance List |

Section 16: Other Information

HMIS Rating

| Health | 1 |
| Flammability | 1 |
Reactivity   0
0=Minimal  1=Slight  2=Moderate  3=Serious  4=Severe
*=Chronic Health Hazard

RHEIN CHEMIE CORPORATION’s method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by RHEIN CHEMIE CORPORATION as a customer service.

Contact:      HES Dept.
Phone:        (440) 285-3547
MSDS Number: 000000002826
Version Date: 05/20/2005
MSDS Version: 1.2

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Indicates Relevant Change Made.