MATERIAL SAFETY DATA SHEET

ADDITIN RC 5001 473D/1892S

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 5001 473D/1892S
Article Number: 2282347
Chemical Family: Polymeric hydrocarbon
Chemical Name: Aromatic Hydrocarbon Resin
Product Use: The product is not affected by the European directive 2002/95/EC (RoHS), This product does not contain any materials considered toxic, observational, restricted or banned by the Korean Ministry of Environment.

Section 2: Composition/Information on Ingredients

HAZARDOUS INGREDIENTS

Ingredient Name/ CAS Number Exposure Limits Concentration

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 3: Hazards Identification

EMERGENCY OVERVIEW

CAUTION! No Physical Hazards  Color: Colorless to Yellow  Form: Liquid  Odor: Odorless
Ground containers and equipment before transferring to avoid static sparks. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. Irritating gases/fumes may be given off during burning or thermal decomposition.

POTENTIAL HEALTH EFFECTS

Route(s) of Entry: Inhalation, Skin Contact, Eye Contact
HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Eye Hazards
Acute Eye Hazards: This product is expected to cause only minimal eye irritation.

Chronic Eye Hazards: None reported for the product.

General Effects of Exposure
Acute Effects of Exposure: It is expected that this product will be essentially non-irritating to the eyes and skin and essentially non-toxic by ingestion. This product, as a whole, under these conditions, has not been associated with any adverse acute health effects.

Chronic Effects of Exposure: None reported for this product as a whole.

Carcinogenic Components:
NTP: None
IARC: None
OSHA: None

Medical Conditions Aggravated by Exposure: None

Section 4: First Aid Measures

First Aid for Eye: Call a physician immediately. 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.

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

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

First Aid for Ingestion: Call a physician. If material is ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

Note to Physician: Treat symptomatically.

Section 5: Fire Fighting Measures

Flash Point: 193 °C DIN 51376

Flammable Limits:

Material Name: ADDITIN RC 5001 473D/18925 Article Number: 2282347
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Explosion Limit (UEL %)</td>
<td>Not Established</td>
</tr>
<tr>
<td>Lower Explosion Limit (LEL %)</td>
<td>Not Established</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>360 °C</td>
</tr>
<tr>
<td>Extinguishing Media: Suitable</td>
<td>Dry Chemical, Foam, Water spray for large fires.</td>
</tr>
<tr>
<td>Special Fire Fighting Procedures</td>
<td>Evacuate non-emergency personnel to a safe area. 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.</td>
</tr>
</tbody>
</table>

**Section 6: Accidental Release Measures**

**Spill or Leak Procedures:** Extinguish all ignition sources. Keep unnecessary personnel out of spill area. 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. Cover spill with absorbent material, such as sand, sweeping compound or diatomaceous earth; collect material for disposal. Sweep up material and place in appropriately marked containers. Ventilate area to remove vapors.

**Other Accidental Release Notes:** Rhein Chemie requires that CHEMTREC be immediately notified (800-424-9300) when this product is unintentionally released from its container during its course of distribution, regardless of the amount released. Distribution includes transportation, storage incidental to transportation, loading and unloading. Such notification must be immediate and made by the person having knowledge of the release.

**Section 7: Handling and Storage**

**Storage Temperature:** Store at ambient conditions

**Special Sensitivity:** Heat. Moisture.

**Handling/Storage Precautions:** Keep away from heat, sparks and flames. Store in a dry place away from excessive heat. Keep container tightly closed when not in use. All handling equipment should be properly grounded to prevent the build-up of electrostatic charges. Storage area should be equipped with sprinkler system. Handle in accordance with good industrial hygiene and safety practices.
Section 8: Exposure Controls/Personal Protection

Personal Protection Equipment
Eye Protection Requirements: Not Noted

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: Under normal handling conditions, at room temperature using good industrial hygiene practices, a respirator is not required. Air purifying respirator equipped with a dust and mist filter cartridge if fumes or dust are near or exceed the exposure limits listed in Section 2. An organic vapor cartridge should be used if ventilation is not sufficient to control fumes released during thermal processing.

Section 9: Physical and Chemical Properties

Physical Form: Liquid
Color: Colorless to Yellow
Odor: Odorless
pH: Not Applicable
Boiling Point: > 300 °C
Melting/Freezing Point: Not Established
Softening Point: Approximately 95 °C
Pour Point: -40 °C
Viscosity: 330 mPa.s @ 25 °C
Solubility in Water: Miscible
Solubility (non Aqueous): Not Established
Specific Gravity: Approximately 1.06 @ 68 °F (20 °C)
Bulk Density: Not Established
Vapor Pressure: Not Established

Section 10: Stability and Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur
Substances to Avoid: Oxidizing materials
Conditions to Avoid: Avoid heat, flames, sparks and other sources of ignition.
Decomposition Temperature: > 193 °C
Decomposition Products: By fire and/or thermal decomposition: oxides of carbon and other undetermined aliphatic fragments.
Section 11: Toxicological Information

Toxicity Data for ADDITIN RC 5001 473D/1892S
Toxicity Note: No data available for this product.

Section 12: Ecological Information

Ecological Data for ADDITIN RC 5001 473D/1892S
Ecological Note: No data available for this product.

Section 13: Disposal Considerations

Waste Disposal Method: Disposal must be in compliance with federal, state and local environmental control regulations. If incinerated, toxic and corrosive combustion gases must be properly handled.

Empty Container Precautions: Empty container retains product residue and can be hazardous.

Section 14: Transportation Information

Technical shipping name: Polymeric Hydrocarbon

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
Number:

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

Section 15: Regulatory Information

United States Federal Regulations
OSHA Hazcom Standard: Non-Hazardous

TSCA Inventory List: On TSCA Inventory

CERCLA Hazardous Substance:
Component(s):
None

Reportable Quantity

SARA Title III
SARA Section 302 Extremely Hazardous Substances:
Component(s)/
CAS Number
None

Concentration
Min. Max.

SARA Section 311/312 Hazard Categories:
Non-hazardous under Section 311/312

SARA Section 313 Toxic Chemicals:
Component(s)/
CAS Number
None

Reporting Threshold
Concentration
Min. Max.

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
Component(s)/
CAS Number
Polyether polyol
NJTSRN:000005564

State Code: PA-N, NJ-N

Concentration
Min. Max.
100%

State Code Translation Table
PA-N = Pennsylvania Non-hazardous
NJ-N = New Jersey Other - includes predominant ingredients

Foreign Chemical Inventory List(s)
EINECS (Europe):
Listed

DSL (Canada):
Listed

AICS (Australia):
Listed

MOE (Korea):
Listed

PICCS (Philippines):
Listed

Section 16: Other Information
HMIS Rating

<table>
<thead>
<tr>
<th>Health</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>

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: 000000005178
Version Date: 06/12/2009
MSDS Version: 1.1

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Indicates Relevant Change Made.