MATERIAL SAFETY DATA SHEET

ADDOLINK TR FLAKES  55B

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: ADDOLINK TR FLAKES  55B
Article Number: 1569914
Product Code: 001569914
Chemical Family: Polyalcohol

Section 2: Composition/Information on Ingredients

HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient Name/ CAS Number</th>
<th>Exposure Limits</th>
<th>Concentration</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trimethylolpropane (TMP) 77-99-6</td>
<td>OSHA (PEL): Not Established</td>
<td>100%</td>
<td></td>
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<td></td>
<td>ACGIH (TLV): Not Established</td>
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Section 3: Hazards Identification

EMERGENCY OVERVIEW

Causes respiratory tract irritation. May cause skin irritation. May cause eye irritation. May cause nervous system damage. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. Toxic gases/fumes are given off during burning or thermal decomposition.

POTENTIAL HEALTH EFFECTS

Route(s) of Entry: Eye Contact, Skin 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. Trimethylolpropane is reported to cause irritation of the respiratory tract.

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

**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:** Eye contact may cause eye irritation with discomfort, tearing, or blurring of vision.

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

**Ingestion Hazards**

**Acute Ingestion Hazards:** Not a likely route of exposure. However, if ingested this product is expected to cause some gastrointestinal distress with nausea and vomiting. Other symptoms can include temporary nervous system depression with anesthetic effects such as dizziness, headache, confusion, incoordination, and possibly loss of consciousness.

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

**Carcinogenic Components:**

- **NTP:** None
- **IARC:** None
- **OSHA:** None

**Medical Conditions Aggravated by Exposure:** Individuals with preexisting diseases of the central nervous system may have increased susceptibility. May aggravate existing skin disorders.

**Human Health Effects Postnote:** Data has not been established for this product as a whole. The data listed in this section is based on the hazards of the individual components.

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**Section 4: First Aid Measures**

**First Aid for Eye:** Get medical attention if irritation develops or persists. 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: 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. Wash clothing and clean shoes before reuse.

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

First Aid for Ingestion: If material is ingested, do not induce vomiting unless directed to do so by medical personnel. Call a physician immediately. Should vomiting occur, keep patients head below hip level to prevent aspiration of fluid into the lungs. Never give anything by mouth to an unconscious person.

Note to Physician: Treat symptomatically.

Section 5: Fire Fighting Measures

Flash Point: Approximately 363 °F (184 °C)

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

Extinguishing Media:
- Suitable: Water, 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. During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion.

Unusual Fire/Explosion Hazards:
This product contains trimethylolpropane (TMP) and should not be used in formulations with phosphorous derivatives that may be subject to pyrolysis conditions unless fully tested to establish the absence of toxic bicyclic phosphates under such conditions.

Section 6: Accidental Release Measures

Spill or Leak Procedures: Extinguish all ignition sources. 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: Not Established - Ambient Recommended

Shelf Life: Not Determined

Special Sensitivity: Heat and sources of ignition.

Handling/Storage Precautions: Keep container tightly closed when not in use. Avoid contact with skin or clothing. Avoid breathing dusts, vapors or mists. Do not reseal container if contamination is suspected. Do not store with incompatible materials. 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: 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. Barrier creams may be used but their use should be kept to a minimum.

Ventilation Requirements: Use local exhaust ventilation if dusting or misting is a problem, to maintain air levels below the recommended exposure limit. Ventilation equipment should be explosion-proof if explosive concentrations of dust, vapor or fume are present.


Additional Protective Measures: Safety showers and eyewash stations should be accessible to the work area.

Section 9: Physical and Chemical Properties

Physical Form: Solid
Appearance: Flakes
Color: White
Odor: Slight Odor
Odor Threshold: Not Established
pH: Not Established
Boiling Point: 572 °F (300 °C)
Melting/Freezing Point: Not Established
Viscosity: Not Established
Solubility in Water: Soluble
Specific Gravity: Approximately 1.08
Bulk Density: Not Established
Vapor Pressure: Not Established
Vapor Density: Not Established
VOC by Weight: Not Applicable
HOC by Weight: 0 %

### Section 10: Stability and Reactivity

**Stability:** Stable
**Hazardous Polymerization:** Will not occur
**Substances to Avoid:** Do not combine this product with phosphorous or phosphorous containing materials. Incompatible with powerful inorganic oxidizers, such as concentrated nitric acid or strong hydrogen peroxide.
**Decomposition Products:** By fire - Carbon dioxide, carbon monoxide, bicyclic phosphates, tetrahydrofuran and other aliphatic fragments which have not been determined.

### Section 11: Toxicological Information

**Toxicity Data for ADDOLINK TR FLAKES 55B**
Toxicity Note: No data available for this product.

**Toxicity Data for Trimethylolpropane (TMP)**
- **Acute oral toxicity:** LD50 = > 5,000 mg/kg (Rat)
- **Acute dermal toxicity:** LD50 = > 500 mg/kg (Rat)
- **Acute inhalation toxicity:** Approximately 0.3 mg/L, 4 hrs.
- **Eye Irritation:** Non-irritating (Rabbit)
- **Skin Irritation:** Non-irritating (Rabbit)

### Section 12: Ecological Information

**Ecological Data for ADDOLINK TR FLAKES 55B**
Ecological Note: Water Pollution Class WGK 1 - slightly hazardous to water (German Water Resources Act)

**Ecological Data for Trimethylolpropane (TMP)**
- **Fish Toxicity:** 1,000 mg/L, 48 hrs. Ide, silver or golden orfe (Leuciscus idus)
- **Invertebrate Toxicity:** > 102 mg/L, 48 hrs. Water flea (Daphnia magna)
Ecological Note: No data available for this component.

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. 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:

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:
- Radioactive?: Non-Radioactive

Section 15: Regulatory Information

United States Federal Regulations

OSHA Hazcom Standard Rating: Hazardous

TSCA Inventory List: On TSCA Inventory

CERCLA Hazardous Substance:
SARA Title III
SARA Section 302 Extremely Hazardous Substances:

Component(s) / CAS Number
None

Reportable Quantity
None

SARA Section 311/312 Hazard Categories:
Immediate Health Hazard

SARA Section 313 Toxic Chemicals:

Component(s) / CAS Number
None

Reporting 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
Trimethylolpropane (TMP) 77-99-6

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
MITI (Japan): Listed
MOE (Korea): Listed
PICCS (Philippines): Listed

Section 16: Other Information

HMIS Rating
Health 1
Flammability 1
Reactivity 1
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: 000000001867
Version Date: 01/17/2008
MSDS Version: 1.3

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Indicates Relevant Change Made.